[0031] The connector arrangement has no internal locking mechanism to provide mechanical stability for the connection. The radio part **102** and the antenna **100** are connected together using fastening means **104**A. Similar fastening means may be on the other side of the radio part (not shown). The fastening means may be realized with a screw, bolt or any other suitable fastening arrangement known in the art. In an embodiment, the fastening means connecting the radio part and the antenna together provide also the mechanical stability for the connector arrangement. As the radio part and the antenna are locked together using the fastening means the connector arrangement achieves mechanical stability. In an embodiment, this kind of fastening enables the small size of the connector arrangement as there is no need for separate locking system for each connector-bullet connector-second connector combinations. In this example, all four combinations achieve mechanical stability with the same fastening means.

[0032] In an embodiment, the first connectors are movable in relation to the antenna **100** in at least two directions orthogonal with each other. The movability may be achieved by using a spring loaded bed, for instance. The connection of the first connectors may be called floating and the connection of the second connectors may be called fixed. The floating connection makes the connecting of the antenna and the radio part and the first connector-bullet connector-second connector combinations easier.

[0033] In an embodiment, guide elements or guiding means **400**, **402** may be utilized to attach the antenna **100** into correct position with the radio part **102**. The guiding means **400**, **402** may comprise a plug in the antenna part and a cavity in the radio part or vice versa, for example. The use of guiding means makes it possible to direct the first and second outer connectors together with the accuracy smaller than the movement allowed by the floating connection. The floating connection may be either on the antenna side or on the radio part side.

[0034] FIG. **5** illustrates the guiding means and floating connection. FIG. **5** shows an example of the antenna **100** from the side facing the radio part. The side comprises the guiding means **400** and the connector arrangement **300** comprising in this example four first connector-bullet connector-second connector combinations. In an embodiment, the movable section **500** comprises the four first connector-bullet connector-second connector combinations. The fastening means **104**A, **104**B, **104**C, **104**D of the antenna part are common for the four first connector-bullet connector-second connector combinations.

[0035] Advantages of the described solution comprise are stabile structure and quick assembly. From the electrical point of view the length of radio frequency lines are shorter than in prior art solution using feeders or cables and that means lower losses in radiofrequency lines. In addition, phase variance is minimal because cable usage is minimized.

[0036] In prior art connectors comprise several parts such as connector housing (outer connector) insulator and inner connector part. This kind of structure causes connection joints between different radiofrequency parts that can generate for instance passive intermodulation or other electrical/mechanical contact problems and extra costs.

[0037] FIGS. **6** and **7** illustrate an embodiment of the invention, where the first and/or second inner connector comprises an integrated low pass filter in the same body as the protruding element. FIGS. **6** and **7** show an example of a first connector **200**. The connecter might as well be the second connector or other connector. The connector **200** comprises outer connector **206**A, **206**B and an inner connector **208** with a protruding element **210**. The outer connector may be formed of a single element.

[0038] In an embodiment, the inner connector **208** comprises a low pass filter **600** integrated to the same body as the inner connector. Thus, the low pass filter is of the same material and there are no joints between the protruding element **210** and the low pass filter.

[0039] In an embodiment, the inner connector **208** comprises one or more insulators **604**, **602** axially surrounding at least part of the inner connector. In an embodiment, inner connector comprises one or more grooves **606** on a surface facing radially outwards of the inner connector. The insulator **604** of the inner connector may be attached to the one or more grooves. The insulator **604** of the inner connector **208** may be injection moulded to the one or more grooves **606**, for instance.

[0040] The proposed solution leads to a good mechanical structure that is easy to implement. Minimizing amount of parts and joints leads to a shorter tolerance chain. The structure is stabile structure and quick to assemble in production. In addition, parts of the connector can be reused if needed for example in production failure situation. Reducing the number of parts and joints and the ease of assembly leads also to cost reduction. For example, typically in connectors a FEP (fluor plastics) tube is used for supporting and isolating a separate low pass filter. In the proposed structure the use of the FEP tube, which is difficult to produce accurately, is avoided as insulation may be provided by insulator bands attached to grooves of the inner connector material.

[0041] It will be obvious to a person skilled in the art that, as the technology advances, the inventive concept can be implemented in various ways. The invention and its embodiments are not limited to the examples described above but may vary within the scope of the claims.

1. A connector arrangement, comprising:

an attaching portion configured to receive a first object;

a spring-loaded bed disposed in the attaching portion, the spring-loaded bed configured to couple the attaching portion to the first object and to enable movement of the connector arrangement in relation to the first object in at least two different directions;

an outer connector depending from the attaching portion; and

an inner connector disposed in the outer connector and having a first end extending through the spring-loaded bed and into the attachment portion and having a protruding element at a second end thereof extending into the outer connector;

wherein the outer connector depending from the attaching portion is configured to make a contact with an outer connector on a second object to form a first conductive signal path from the outer connector depending from the attaching portion to the outer connector on the second object;

wherein the protruding element is configured to make a contact with a cavity in the second object to form a second conductive signal path from the inner connector to the cavity in the second object;